FRBSF WEEKLY LETTER

Number 95-27, August 18, 1995

Productivity and Labor Costs in Newly Industrializing Countries

A recurring theme in popular discussions about international trade is the "sweatshop labor" argument. It says that countries with low wages (or lax regulations) have an unfair competitive advantage, and its proponents advocate protection against imports from low-wage countries to save U.S. jobs.

But the "sweatshop labor" argument fails to consider that low wages and weak regulations do not by themselves guarantee low costs. If they did, countries with rock-bottom labor costs, such as Bangladesh and Botswana, would rule world trade. Clearly, labor productivity matters, too. To the extent that low wages reflect low labor productivity, any advantage to employing low-wage labor is offset. Indeed, popular concern focuses on countries such as Mexico and South Korea, countries with wages well above those in Africa and South Asia. A more appropriate approach would be to ask whether labor costs are low relative to productivity in developing countries.

A related fear is that the acquisition of foreign technology and capital will tend to equalize productivity in low- and high-wage countries. Even with the increasing ease of technology transfer and capital mobility, however, other factors—such as low levels of human capital and poor infrastructure and transportation services—can hold down productivity in poor countries. More importantly, even if productivity growth did accelerate in some low-wage countries, the advantage could be reduced by compensating wage gains.

To shed light on these issues, this *Weekly Letter* presents new estimates of productivity and labor costs for five Pacific Basin Newly Industrializing Countries (NICs) relative to the U.S. for 1970 to 1990. The five countries are Korea, Malaysia, Mexico, the Philippines, and Thailand, and the data are for the manufacturing sector (for details on the methods of computation and further results, see Golub 1995). The data suggest that the "sweatshop labor" argument, and its variants, greatly exaggerate the competitive edge of low-wage countries.

Productivity and unit costs in manufacturing for five countries, 1970–1990

To see the extent to which low wages in the five NICs also signals low labor costs and, therefore, an unfair competitive advantage, we first look at a measure of productivity for those countries. Figure 1 presents output per worker in manufacturing. Not surprisingly, labor productivity levels were well below those of the United States for all five NICs during this period. It is interesting to note the changes over those twenty years. In South Korea, the productivity gap narrowed substantially, from 22 percent of the U.S. level in 1970 to 45 percent by 1990. Thai and Mexican productivity have gained to a lesser extent, while Malaysia and the Philippines experienced slower labor productivity growth than the United States.

Figure 2 shows relative labor compensation per employee in manufacturing. Labor compensation includes non-cash benefits, but will be referred to here as wages for short. Like productivity, wages in the NICs are well below the U.S. level in all cases. Comparison of Figures 1 and 2 confirms that variations in relative wage levels across countries tend to be correlated with productivity. In 1990, Korea had the highest productivity of the five NICs, with Mexico second, and the other three countries roughly tied. The 1990 wage rankings are the same as this productivity ranking. Changes in relative productivity over time

PACIFIC BASIN NOTES *Pacific Basin Notes* appears on an occasional basis. It is prepared under the auspices of the Center for Pacific Basin Monetary and Economic Studies (CPBMES) within the FRBSF's Economic Research Department.

Figure 1
Productivity Relative to the U.S.

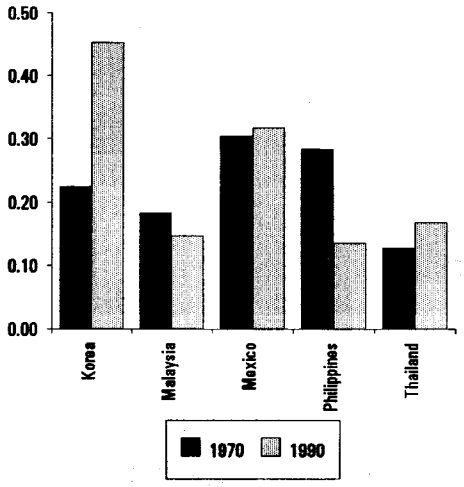
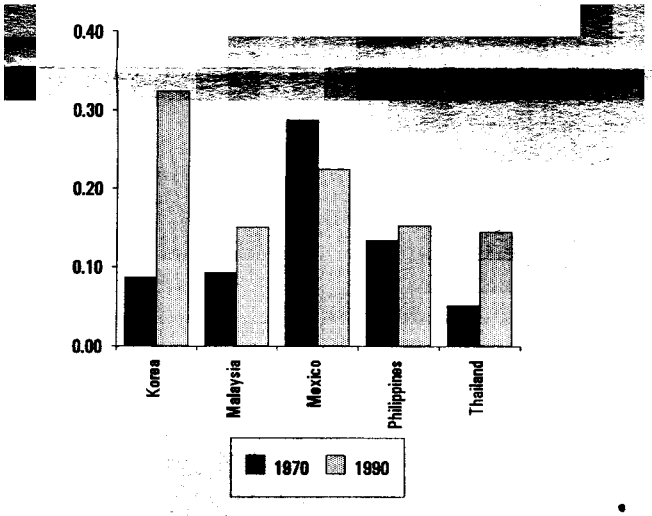


Figure 2
Labor Compensation Relative to the U.S.



also tend to be correlated. For example, Korea's rapid relative productivity growth has been accompanied by even more rapid relative wage growth.

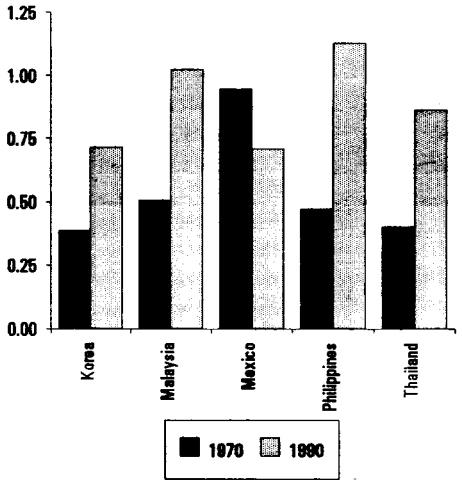
Figure 3 shows labor cost per unit of output—the ratio of wages to productivity—relative to the United States (a value of 1.0 implies that unit labor costs are equal to those in the U.S.). Unit labor costs are a more useful gauge of competitiveness than wage rates. For example, even if wage rates in Mexico are lower than in the U.S., Mexico still could have higher unit labor costs if its productivity is lower than U.S. productivity. And although unit labor costs measure only part of the cost of production, they still are likely to be a useful indicator of national competitiveness in international trade. The reason is that labor costs are likely to differ much more across countries than other costs, because labor is much less footloose than raw materials and capital.

For all countries, Figure 3 reveals that relative unit labor costs are much closer to 1.0 than either wages or productivity are, especially in 1990. For the four Asian NICs, unit labor costs trended upward between 1970 and 1990, in most cases reaching a level near 1.0 in 1990, as wages increased much more rapidly than productivity for all these countries, both relative to the United States and in absolute terms. The rise in the Asian NICs' relative unit labor costs partly reflects falling U.S. unit labor costs, as the growth of productivity slightly exceeded the growth of real wages in U.S. manufacturing between 1970 and 1990. But most of the increased Asian relative unit labor costs were accounted for by increases of the ratio of wages to productivity in the NICs themselves. The combinations of wage and productivity growth are very different in the four Asian NICs, but all experienced a comparable rise in unit labor costs. In the Philippines and Malaysia, for example, relative wages barely increased, but unit labor costs rose because productivity growth was markedly less than in the United States. Korea and Thailand exhibited much greater productivity growth, but their unit labor costs rose as well because wages rose even more relative to the U.S.

The growth of relative wages in the four Asian NICs between 1970 and 1990 reflected a combination of increases in real wages in domestic currency and appreciation of their currencies (in real terms, i.e., after allowing for inflation differences). The three-fold increases in Korean and Thai relative wages were mostly due to rises in real wages in domestic currency, but real appreciation against the dollar also played a part. For the Philippines and Malaysia, currency appreciation was the dominant factor driving up relative wages. For purposes of evaluating international competitiveness, the source of the increases in relative wages is of less significance than their size, although exchange rate movements are more volatile.

The Mexican behavior of wages and unit labor costs differs from that of the Asian NICs. In 1970, Mexican wages and productivity were both about 30 percent of their U.S. counterparts, and Mexican relative unit labor costs remained close to or above 1.0 until the early 1980s. The large decline in Mexican relative wages after 1982 can be attributed to its foreign debt crisis, providing an extreme illustration of the adjustment of real wages to adverse macroeconomic shocks.

Figure 3
Unit Labor Cost Relative to the U.S.



Implications for international trade

According to textbook economics, if a labor market is competitive, then productivity and wages should be related, even in an economy closed to trade. For example, if wages are below marginal productivity, firms have an incentive to hire more workers, and will bid up wages as the labor market tightens. In an economy open to trade, the forces of international competition also come into play. If a country's unit labor costs are below world levels, such a country will experience increased demand for its products, eventually driving up domestic wages and/or appreciating the domestic currency. The empirical evidence presented above suggests that the NICs' wages and productivity in overall manufacturing have converged, perhaps due to increased integration in the world market.

Productivity gaps between countries differ across industries, however, giving rise to comparative advantage. For example, Thailand's wages and productivity in aggregate manufacturing were both about 15 percent of the U.S. level in 1990, but the Thai/U.S. productivity ratio is likely to be greater than 15 percent in simple products such as textiles and less in sophisticated products like machinery. If wages adjusted for skills are about the same in all industries in Thailand, as they should be in a competitive labor market, Thai relative unit labor costs will be low in textiles and high in machinery. (Golub 1995 provides empirical evidence of the effect of sectoral unit labor costs on trade patterns for several countries.) Developing countries therefore tend to be net exporters of simple labor-intensive goods, and net importers of more sophisticated products. Imports of labor-intensive products from low-wage countries are likely to be harmful to unskilled workers in the U.S., but beneficial to almost everyone else, as countries specialize according to comparative advantage. (However, the adverse effect on the real wages of unskilled workers in the U.S. is mitigated to the extent that they consume lower-priced imported goods.) In some unionized and imperfectly competitive U.S. industries, increased competition from lower-cost imports may have had a large impact on wages. But technological change is probably much more important than international trade in explaining the decline in real wages of unskilled labor in the United States in recent decades (see Kasa 1994).

Conclusion

Contrary to the sweatshop labor argument, low wages are a symptom of low productivity, not an independent source of international competitiveness. Wages and productivity do not offset perfectly at all times, but they are strongly related in the ways economic theory suggests. In 1970, labor costs were low relative to productivity in the five NICs studied, but in recent decades their wages have increased more rapidly than productivity, compared to the United States, bringing unit labor costs close to parity. This analysis indicates that fears about unfair competition from low-wage NICs are greatly exaggerated and should not stand in the way of free international trade, which benefits both the U.S. and developing countries.

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